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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,091	06/20/2006	Shoichi Hirano	053482	7182

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EXAMINER	
SYKES, ALTREV C	

ART UNIT	PAPER NUMBER
1794	

MAIL DATE	DELIVERY MODE
08/06/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/564,091	HIRANO ET AL.	
	Examiner	Art Unit	
	ALTREV C. SYKES	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 June 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) *9-16* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 17-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *20080124, 20080519*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The declaration under 37 CFR 1.132 filed June 18, 2008 is acknowledged by examiner and is found to be insufficient to overcome the anticipation rejection of claims 1-4, 6-12 and 14-16 based upon Shoichi Hirano et al. (JP 2000-017572) and to overcome the obviousness rejection of claims 5 and 13 over Shoichi Hirano et al. (JP 2000-017572) as set forth in the previous Office action. Evidence of secondary considerations, such as unexpected results or commercial success, is irrelevant to 35 U.S.C. 102 rejections and thus cannot overcome a rejection so based. *In re Wiggins*, 488 F.2d 538, 543 179 USPQ 421, 425 (CCPA 1973).

Regarding claims 5 and 13, the declaration include(s) statements which amount to an affirmation that the claimed subject matter functions as it was intended to function. This is not relevant to the issue of nonobviousness of the claimed subject matter and provides no objective evidence thereof. See MPEP § 716.

Additionally, the declaration refer(s) only to the system described in the above referenced application and not to the individual claims of the application. Thus, there is no showing that the objective evidence of nonobviousness is commensurate in scope with the claims. See MPEP § 716. The property that the disclosed textile products have a weakened binding force of the components of stains and dirt to the fibers without using a surfactant recites limitations not provided for in the instant amended claims.

In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness. As such it is noted that the basis of the declaration resides on the fact that applicant thought, at the time of filing the prior art application, that it would be necessary to develop a different treatment method in order to weaken the binding force of the components of stains and dirt to the fibers without using a surfactant. Further, "[T]he discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer." Atlas Powder Co. v. Ireco Inc., 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Thus the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977). See also MPEP § 2112.01.

2. Therefore, the declaration as filed by applicant is found to be insufficient to overcome the rejections as set forth in previous office action.

Response to Arguments

3. Examiner notes the corrected abstract and respectfully withdraws the objection made to the specification in that regard. The amendment has been entered.

4. Applicant's arguments filed June 18, 2008 have been fully considered but they are not persuasive.

In response to applicant's argument that the reference fails to show certain features of applicant's invention, it is noted that the features upon which applicant

relies (i.e., weakened binding force of the components of stains and dirt to the fibers without using a surfactant and the consumption of water can be significantly be reduced) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Additionally, as set forth above, the declaration filed by applicant is found not to be persuasive. In regards to the comparison of examples 1-7 of the instant application and the reference example in the prior art, applicant's arguments are not found to be persuasive because they are not commensurate in scope with the claims.

Further, the prior art discloses "Paying attention to being oily matter, changing the way of thinking into the view of "Making it easy to fall, even if it becomes dirty", and becoming the main factor of sweat dirt by making fiber into a hydrophilic property it becomes easy to detach sweat dirt, or resulted in the conclusion of becoming easy to fall by wash, and although the cellulosic fiber was a hydrophilic property from the first, a header and this invention were completed for it being effective to give this a hydrophilic property further." (See [0008]) As such, it is understood by examiner that while not only trying to provide an anti-yellowing function, the treatment was also capable of soil (dirt) repellent properties as well.

In view of the amendment to the claims by applicant, examiner wishes to withdraw the previous rejection as set forth in the previous office action mailed

January 29, 2008 in view of newly found prior art for the added limitations in the claims. Specifically, the claims now recite "applying an oily component to the textile product". The previously applied prior art Shoichi (now named Hirano) will now be used as a secondary teaching as set forth below.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-8 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soane et al. (US 6,379,753) in view of Hirano et al. (JP2000-017572)

Regarding claim 1, Soane et al. discloses compounds and methods for modifying a material to change properties of the material, as well as a variety of products obtained. (See Abstract) Multifunctional molecules for use in modifying the surfaces of materials such as textile fibers, yarns and other fabrics made of or, including cotton are provided. The multifunctional molecules can include hydrophobic regions and/or hydrophilic regions. The multifunctional molecules also may include binding functional groups that permit either non-covalent or covalent binding to the material being modified, thus permitting the multifunctional molecule to form a non-covalent or covalent coating on the material. (See Abstract) In particular, compositions and methods are provided that

permit the modification of a variety of textile fiber materials and similar substrates to alter properties including water repellency, grease repellency, soil resistance, oil or grease resistance, permanent press, detergent free washing, increased speed of drying, and improving strength and abrasion resistance, and to improve comfort, where such fibers are used alone, or in combinations or blends with one or more of the others before or after treatment. The multifunctional polymers may include hydrophilic functional groups that are capable of interacting with the hydrophilic surface. (See Col 12, lines 52-55) In a preferred embodiment, a graft copolymer is provided that consists of a hydrophilic backbone with hydrophobic polymer grafts. The graft copolymer is applied to the materials, such as cotton fabric (a hydrophilic surface) to produce a durable hydrophilic coating. (See Col 13, lines 4-6) Soane et al. also discloses that if fluorinated hydrophobic monomers are used, an oil repellent finish is produced. (See Col 13, lines 15-16) As such, it would inherently be provided that the textile fabric of Soane would be exposed to oily substances hence the suggestion of an oil repellent finish by Soane at al. Therefore, the method could be tailored to provide a fabric that when washed without detergent would readily release any oil having the oil repellent finish with the detergent free washing.

Soane et al. discloses all of the claim limitations as set forth above but the reference does not explicitly disclose all of the details for hydrophilization treatment.

Hirano et al. discloses a method to afford a cellulose-based fiber or cellulose-based textile product with excellent anti-yellowing function suitable for

underwear by hydrophilicization treatment of the above fiber or textile product. (See Abstract and [0016])

As Soane et al. and Hirano et al. are both directed to the treatment of fabrics, the art is analogous. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the hydrophilization treatment as taught by Hirano in the method as disclosed by Soane et al. in order to further enhance the final fiber products with an anti-yellowing function. (See [0016])

Regarding claims 2-4 and 6-8, modified Soane et al. discloses all of the claim limitations as set forth above.

Additionally the reference discloses the method wherein:

- the hydrophilization treatment is carried out by at least one method selected from a group consisting of a method for introducing a hydrophilic group. (See Hirano [0023])
- the fiber or fiber product contains at least a cellulose fiber, and the moisture absorption ratio of the cellulose fiber is adjusted to be 7.1% or more by the hydrophilization treatment. (See Hirano [0016] and 7.1%-20% in [0010])
- a carboxyl group is introduced into the cellulose fiber by carboxymethylation. (See Hirano [0012] and [0024])
- the carboxymethylation degree is adjusted to be 0.1 to 10% by mole. (See Hirano [0024])

Regarding claim 5, Hirano et al. discloses heat treatment temperature can be 60 degrees C or more and can usually be less than 40 degrees C. although the concentration of the alkali-metal salt of the monochloroacetic acid should just set the conditions of processing liquid that the target workability is obtained suitably can be 100 or more g/l preferably. A sodium hydroxide can be used for the processing liquid in which a cellulosic fiber or a cellulosic fiber product is contacted at the hydroxide of alkali metal, and a concrete target. Reactivity tends to go up and usually needs to make NaOH concentration 20 or more g/l. (See [0031-0035])

Regarding claim 7, Hirano et al. discloses hydrophilization processing can be carried out by carrying out the graft of the hydrophilic molecule to the graftized cellulosic fiber or cellulosic fiber product of a hydrophilic molecule. As a hydrophilic molecule, hydrophilization processing can be carried out by carrying out the graft of the vinyl system copolymer of methacrylamide. (See [0038]-[0039] and [0047]-[0048])

Regarding claim 8, Hirano et al. discloses a hydrophilic molecule carries out a graft, and the rate of a graft is 2% or more preferably, and is 20% or less still more preferably 25% or less preferably 30% or less 1% or more. (See [0041] and [0047])

Regarding claims 17-19, it is noted by examiner that the process would be provided for by modified Soane et al. process. While Soane et al. does not explicitly teach monochloroacetic acid to aid in heat treatment, it does disclose

using hydrophobic/oleophobic groups capable of repelling water/soil for example, free hydroxyl groups can be converted to carboxylates with reagents such as chloroacetic acid or succinic anhydride and activation with chloroacetic acid followed by reaction with a nucleophilic alkyl, such as an alkyl amine, alkyl alcohol, or alkyl thiol, in the presence of a catalyst. (Col 14, lines 21-34)

Hirano et al. discloses heat treatment temperature can be 60 degrees C or more and can usually be less than 40 degrees C. although the concentration of the alkali-metal salt of the monochloroacetic acid should just set the conditions of processing liquid that the target workability is obtained suitably can be 100 or more g/l preferably. A sodium hydroxide can be used for the processing liquid in which a cellulosic fiber or a cellulosic fiber product is contacted at the hydroxide of alkali metal, and a concrete target. Reactivity tends to go up and usually needs to make NaOH concentration 20 or more g/l. (See [0031-0035])

One of ordinary skill in the art would have been motivated at the time of the invention to utilize the monochloroacetic acid and heating process as taught by Hirano et al. in order to better tailor water/soil repellency.

The modified Soane et al. reference does not explicitly disclose the specific time duration of 6 to 48 hours for contact with the treatment solution. Since the instant specification is silent to unexpected results, specific time duration of contact with solution is not considered to confer patentability to the claims. As the degree of solvency is a variable that can be modified, among others, by adjusting the time of contact with treatment solution, the precise time

duration of said contact would have been considered an obvious modification by one having ordinary skill in the art at the time the invention was made. In the instant case, Hirano does disclose that the cheesecloth was immersed in the water solution (processing liquid) of monochloroacetic acid sodium hydroxide, heating at 60 degrees C and performing processing for 1 hour. (See [0050]) As such, without showing unexpected results, the claimed time duration cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the amount of time for the contact of cellulose fiber with treatment solution for the purpose of achieving desired degree of solvency, since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (*In re Aller*, 105 USPQ 223).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the

date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALTREV C. SYKES whose telephone number is (571)270-3162. The examiner can normally be reached on Monday-Thursday, 8AM-5PM EST, alt Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1254. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ACS/
7/29/08

/Carol Chaney/
Supervisory Patent Examiner, Art Unit 1794